

DQA: _____ Date: _____

**WORK ORDER NON-CONFORMANCE / UPDATE**

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐					
Date : _____		Step #: _____		QTY Effective : _____			MRB (QSI042) Approval		
Description Work Order Deviation				Disposition				Completed By	
								Lead hand / Supervisor Approval Verification	
								QC / QA Coordinator Approval	
Root Cause		FAULT CATEGORY							
Environment ☐	☐ No Re-verification	☐ Pressure/Forced	☐ Temperature/Cure	☐ Power Loss/Surge	☐ Positioned Wrong				
Design ☐	☐ Operator	☐ Bending	☐ Set-up	☐ Folio/Program	☐ Outside Dimensions				
Doc/Data ☐	☐ Offset/Setup	☐ Centre Not Concentric	☐ BOM/Route	☐ Grain	☐ Over/Under tolerance				
Equip/Tooling ☐	☐ Supplier	☐ Cracks	☐ Broken/Damage/Defect	☐ Weld	☐ Part Incorrect				
Handling/Pre ☐	☐ Training	☐ Crimp/Kink/Ripple/Wave	☐ Inspection Incomplete/Unqualified	☐ Wrong Stock Pulled	☐ Part Lost/Missing				
Material ☐	☐ Use for Testing	☐ Cuffs	☐ Contamination	☐ Out of Sequence	☐ Part Moved				
Internal Transport ☐	☐ Poor Information	☐ Crushing	☐ Countersink	☐ Off-set	☐ Drawing				
Tribal Knowledge ☐	☐ Rushing	☐ Heat Treat	☐ Cut Too Short	☐ Mislabeled	☐ Finish				
LOA ☐	☐ Product Improvement	☐ Wave/Twist in Tube	☐ Instructions Incomplete/Unclear	☐ Fit/Function	☐ Misread				
Substation ☐	☐ Process Improvement	☐ Marks/Chatter	☐ Drill Holes	☐ Misaligned/off center	☐ Turning Sequence				
Past Expiry Date ☐	☐ Manufacturing Process	OTHER : _____							
Misidentified ☐	☐ Past Due								

Work Order ID 142352

March 07, 2016 3:52:21 PM

142352

Page 2

Item ID: D3562-041

Accept

N9000040100

Setup Start ***NS1***

Revision ID:

Stop ***NS2***

Item Name: Step Weldment

Start Date: 3/21/2016 Start Qty: 4.00

4

Cust Item ID:

Required Date: 4/15/2016 Req'd Qty: 4.00

4

Customer:

Reference:

Approvals:

Process Plan:

Date:

Tooling:

Date:

Run Start ***NR1***

QC:

Date:

SPC (Y/N):

Date:

Stop ***NR2***

Sequence ID/
Work Center ID

Operation
Description

Set Up/
Run Hours

Tool ID

Tool #

Plan
Code

Accept
Qty

Reject
Qty

Reject
Number

Insp.
Stamp

130

QC7-Inspect Chemical Conversion Coat

0.00

130

QC

Memo

0.00

Quality Control

DAS

38

9-89

APR 14 2016

140

Small Fab

0.00

140

Small Fab

Memo

0.09

Small Fab

1- Transfer drill Rivet holes as per dwg D3562.

2-Touch-up rivet holes with alodine as per dwg d3562

3-Rivet legs using Scotch-Weld as per dwg D3562.

*****Ensure to wipe off any excess magnobond *****

A/R Scotch-Weld DP460

Batch: 132504 EXP DATE 8/16

DAS

24

9-89

APR 25 2016

DQA: _____ Date: _____

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Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐					
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Root Cause		FAULT CATEGORY							
Environment ☐	No Re-verification ☐	Pressure/Forced ☐	Temperature/Cure ☐	Power Loss/Surge ☐	Positioned Wrong ☐				
Design ☐	Operator ☐	Bending ☐	Set-up ☐	Folio/Program ☐	Outside Dimensions ☐				
Doc/Data ☐	Offset/Setup ☐	Centre Not Concentric ☐	BOM/Route ☐	Grain ☐	Over/Under tolerance ☐				
Equip/Tooling ☐	Supplier ☐	Cracks ☐	Broken/Damage/Defect ☐	Weld ☐	Part Incorrect ☐				
Handling/Pre ☐	Training ☐	Crimp/Kink/Ripple/Wave ☐	Inspection Incomplete/Unqualified ☐	Wrong Stock Pulled ☐	Part Lost/Missing ☐				
Material ☐	Use for Testing ☐	Cuffs ☐	Contamination ☐	Out of Sequence ☐	Part Moved ☐				
Internal Transport ☐	Poor Information ☐	Crushing ☐	Countersink ☐	Off-set ☐	Drawing ☐				
Tribal Knowledge ☐	Rushing ☐	Heat Treat ☐	Cut Too Short ☐	Mislabeled ☐	Finish ☐				
LOA ☐	Product Improvement ☐	Wave/Twist in Tube ☐	Instructions Incomplete/Unclear ☐	Fit/Function ☐	Misread ☐				
Substation ☐	Process Improvement ☐	Marks/Chatter ☐	Drill Holes ☐	Misaligned/off center ☐	Turning Sequence ☐				
Past Expiry Date ☐	Manufacturing Process ☐								
Misidentified ☐	Past Due ☐	OTHER : _____							

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Page 3

Item ID: D3562-041 Accept ***N900040100*** Setup Start ***NS1***
 Revision ID: Stop ***NS2***
 Item Name: Step Weldment
 Start Date: 3/21/2016 Start Qty: 4.00 ***4*** Cust Item ID:
 Required Date: 4/15/2016 Req'd Qty: 4.00 ***4*** Customer:
 Reference:

Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____ Run Start ***NR1***
 QC: _____ Date: _____ SPC (Y/N): _____ Date: _____ Stop ***NR2***

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
150	QC5- Inspect part completeness to step on W/O	0.00							DAS 9 9-85
150									
QC	Memo	0.00							
Quality Control									
160		0.00							
160	Large Fab								DAS 24 9-89
Large Fab	Memo	0.06							
Large Fab	1-Weld end caps as per Dwg d3562 & QSI 004. Inspect for foreign objects as per QSI 024. A/RAluminum Rod <u>131562</u> 2-Grind end cap welds flush as per Dwg D3562								
170	QC10- Inspect visual per QSI004- ground welds	0.00							
170									
QC	Memo	0.00							
Quality Control									

④ 1604-27

4 APR 28 2016

④ 16-05-09 PD

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**WORK ORDER NON-CONFORMANCE / UPDATE**

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Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐					
Date : _____		Step #: _____		QTY Effective : _____			MRB (QSI042) Approval		
Description Work Order Deviation				Disposition				Completed By	
								Lead hand / Supervisor Approval Verification	
								QC / QA Coordinator Approval	
Root Cause		FAULT CATEGORY							
Environment ☐	No Re-verification ☐	Pressure/Forced ☐	Temperature/Cure ☐	Power Loss/Surge ☐	Positioned Wrong ☐				
Design ☐	Operator ☐	Bending ☐	Set-up ☐	Folio/Program ☐	Outside Dimensions ☐				
Doc/Data ☐	Offset/Setup ☐	Centre Not Concentric ☐	BOM/Route ☐	Grain ☐	Over/Under tolerance ☐				
Equip/Tooling ☐	Supplier ☐	Cracks ☐	Broken/Damage/Defect ☐	Weld ☐	Part Incorrect ☐				
Handling/Pre ☐	Training ☐	Crimp/Kink/Ripple/Wave ☐	Inspection Incomplete/Unqualified ☐	Wrong Stock Pulled ☐	Part Lost/Missing ☐				
Material ☐	Use for Testing ☐	Cuffs ☐	Contamination ☐	Out of Sequence ☐	Part Moved ☐				
Internal Transport ☐	Poor Information ☐	Crushing ☐	Countersink ☐	Off-set ☐	Drawing ☐				
Tribal Knowledge ☐	Rushing ☐	Heat Treat ☐	Cut Too Short ☐	Mislabeled ☐	Finish ☐				
LOA ☐	Product Improvement ☐	Wave/Twist in Tube ☐	Instructions Incomplete/Unclear ☐	Fit/Function ☐	Misread ☐				
Substation ☐	Process Improvement ☐	Marks/Chatter ☐	Drill Holes ☐	Misaligned/off center ☐	Turning Sequence ☐				
Past Expiry Date ☐	Manufacturing Process ☐	OTHER : _____							
Misidentified ☐	Past Due ☐								

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142352

Page 4

Item ID: D3562-041 Accept ***N900040100*** Setup Start ***NS1***
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 Item Name: Step Weldment
 Start Date: 3/21/2016 Start Qty: 4.00 ***4*** Cust Item ID:
 Required Date: 4/15/2016 Req'd Qty: 4.00 ***4*** Customer:
 Reference:

Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____ Run Start ***NR1***
 QC: _____ Date: _____ SPC (Y/N): _____ Date: _____ Stop ***NR2***

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
--------------------------------	--------------------------	----------------------	---------	--------	--------------	---------------	---------------	------------------	----------------

180	QC5- Inspect part completeness to step on W/O	0.00							
180									
QC	Memo	0.00							
Quality Control									

190	Chemical Conversion Coat per QSI005 4.1	0.00							
190									
HandFinish	Memo	0.02							
Hand Finishing									

200	White Gloss (Ref 4.2.5.1) per QSI005 4.2.1.3.2	0.00							
200									
Powdercoat	Memo	0.01							
Powder Coating									

200
 Powdercoat
 Powder Coating
 spray paint

START TIME: _____
 OVEN TEMPERATURE: _____
 FINISH TIME: _____

④ 16-03-09 PD
 4 16-5-10 JH
 Spl. 7 → 1
 DAS 41 9-09 16-6-6

DQA: _____ Date: _____



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Date : _____		Step #: _____		QTY Effective : _____			MRB (QSI042) Approval Completed By Lead hand / Supervisor Approval Verification QC / QA Coordinator Approval		
Description Work Order Deviation				Disposition					
Root Cause		FAULT CATEGORY							
Environment ☐	No Re-verification ☐	Pressure/Forced ☐	Temperature/Cure ☐	Power Loss/Surge ☐	Positioned Wrong ☐				
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Material ☐	Use for Testing ☐	Cuffs ☐	Contamination ☐	Out of Sequence ☐	Part Moved ☐				
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Tribal Knowledge ☐	Rushing ☐	Heat Treat ☐	Cut Too Short ☐	Mislabeled ☐	Finish ☐				
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Substation ☐	Process Improvement ☐	Marks/Chatter ☐	Drill Holes ☐	Misaligned/off center ☐	Turning Sequence ☐				
Past Expiry Date ☐	Manufacturing Process ☐	OTHER : _____							
Misidentified ☐	Past Due ☐								

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Item ID: D3562-041 Accept ***N900040100*** Setup Start ***NS1***
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Required Date: 4/15/2016 Req'd Qty: 4.00 ***4*** Customer:
Reference:

Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____ Run Start ***NR1***
QC: _____ Date: _____ SPC (Y/N): _____ Date: _____ Stop ***NR2***

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
210 *210* HandFinish Hand Finishing	Wing Walk as per dwg QSI005 4.4 Batch <i>1113-4450</i> Memo <i>OK see attached</i>	0.00 0.02				<i>1x</i>	<i>1</i>	<i>all 16/06/10</i>	
220 *220* QC Quality Control	QC3- Inspect Part Finish Memo	0.00 0.00				<i>1</i>	<i>16.06.10</i>		DAS 9 9-89
230 *230* Packaging Packaging	Identify as per dwg & Stock Location: <i>W/O</i> Memo <i>147729</i>	0.00 0.00				<i>1x</i>		<i>16/06/10</i>	DAS 36 16-89

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Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐																																																													
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Misidentified ☐	Past Due ☐																																																																

Work Order ID 142352

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Item ID: D3562-041 Accept ***N900040100*** Setup Start ***NS1***
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 Reference:

Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____ Run Start ***NR1***
 QC: _____ Date: _____ SPC (Y/N): _____ Date: _____ Stop ***NR2***

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
240	QC21- Final Inspection - Work Order Release	0.00							
240									
QC	Memo	0.01							
Quality Control									

16/6/2016 *[Signature]*

ML5 JUN 17 2016

DQA: _____ Date: _____

WORK ORDER NON-CONFORMANCE / UPDATE



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Work Order update only ☐

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Date : _____		Step #: _____		QTY Effective : _____			MRB (QS1042) Approval		
Description Work Order Deviation				Disposition				Completed By	
								Lead hand / Supervisor Approval Verification	
								QC / QA Coordinator Approval	
Root Cause		FAULT CATEGORY							
Environment ☐	No Re-verification ☐	Pressure/Forced ☐	Temperature/Cure ☐	Power Loss/Surge ☐	Positioned Wrong ☐				
Design ☐	Operator ☐	Bending ☐	Set-up ☐	Folio/Program ☐	Outside Dimensions ☐				
Doc/Data ☐	Offset/Setup ☐	Centre Not Concentric ☐	BOM/Route ☐	Grain ☐	Over/Under tolerance ☐				
Equip/Tooling ☐	Supplier ☐	Cracks ☐	Broken/Damage/Defect ☐	Weld ☐	Part Incorrect ☐				
Handling/Pre ☐	Training ☐	Crimp/Kink/Ripple/Wave ☐	Inspection Incomplete/Unqualified ☐	Wrong Stock Pulled ☐	Part Lost/Missing ☐				
Material ☐	Use for Testing ☐	Cuffs ☐	Contamination ☐	Out of Sequence ☐	Part Moved ☐				
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LOA ☐	Product Improvement ☐	Wave/Twist in Tube ☐	Instructions Incomplete/Unclear ☐	Fit/Function ☐	Misread ☐				
Substation ☐	Process Improvement ☐	Marks/Chatter ☐	Drill Holes ☐	Misaligned/off center ☐	Turning Sequence ☐				
Past Expiry Date ☐	Manufacturing Process ☐	OTHER : _____							
Misidentified ☐	Past Due ☐								

Picklist Print

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Page 1

Work Order ID: 142352

142352

Parent Item: D3562-041

D3562-041

Parent Item Name: Step Weldment

Start Date: 3/21/2016

Required Date: 4/15/2016

Start Qty: 4.00

Required Qty: 4.00

Comments: IPP Rev:A New Issue 06-11-09 JLM
 IPP rev B ECN 987 07.10.09 EC verified by: DD
 IPP Rev:C ECN1048 07-12-18 DD verified by:ec
 IPP Rev:D 08-07-28 add chemical conversion coat DD verf:EC IPP REV:E
 13.06.03 PER DWG REV.F DD VERF:JLM

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Qty per Kit	Total Qty	Qty Issued	Date Issued	Status
D2622-120C *D2622-120C* Step Extrusion		Manufactured	No			100	Each	23.2360	1	4		APR 13 2016	DAS 24 9-89
Location Loc Qty Loc Code													
WA003 23.236													
130161 0.236													
134783 23													
D2734 *D2734* Step End Plate		Manufactured	No			140	Each	34.0000	2	8		APR 27 2016	DAS 24 9-89
Location Loc Qty Loc Code													
WA003 34													
134415 30													
135488 4													
D3560-041 *D3560-041* Arm Weldment		Manufactured	No			140	Each	2.0000	1	4		APR 25 2016	DAS 24 9-89
Location Loc Qty Loc Code													
WA003 2													
124288 2													

3142895 → 3

3140539 → 4

3141034 → 6

1

DQA: _____ Date: _____

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Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐					
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Root Cause		FAULT CATEGORY							
Environment ☐	No Re-verification ☐	Pressure/Forced ☐	Temperature/Cure ☐	Power Loss/Surge ☐	Positioned Wrong ☐				
Design ☐	Operator ☐	Bending ☐	Set-up ☐	Folio/Program ☐	Outside Dimensions ☐				
Doc/Data ☐	Offset/Setup ☐	Centre Not Concentric ☐	BOM/Route ☐	Grain ☐	Over/Under tolerance ☐				
Equip/Tooling ☐	Supplier ☐	Cracks ☐	Broken/Damage/Defect ☐	Weld ☐	Part Incorrect ☐				
Handling/Pre ☐	Training ☐	Crimp/Kink/Ripple/Wave ☐	Inspection Incomplete/Unqualified ☐	Wrong Stock Pulled ☐	Part Lost/Missing ☐				
Material ☐	Use for Testing ☐	Cuffs ☐	Contamination ☐	Out of Sequence ☐	Part Moved ☐				
Internal Transport ☐	Poor Information ☐	Crushing ☐	Countersink ☐	Off-set ☐	Drawing ☐				
Tribal Knowledge ☐	Rushing ☐	Heat Treat ☐	Cut Too Short ☐	Mislabeled ☐	Finish ☐				
LOA ☐	Product Improvement ☐	Wave/Twist in Tube ☐	Instructions Incomplete/Unclear ☐	Fit/Function ☐	Misread ☐				
Substation ☐	Process Improvement ☐	Marks/Chatter ☐	Drill Holes ☐	Misaligned/off center ☐	Turning Sequence ☐				
Past Expiry Date ☐	Manufacturing Process ☐	OTHER : _____							
Misidentified ☐	Past Due ☐								

Picklist Print

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Work Order ID: 142352

142352

Parent Item: D3562-041

D3562-041

Parent Item Name: Step Weldment

Start Date: 3/21/2016

Required Date: 4/15/2016

Start Qty: 4.00

Required Qty: 4.00

D3560-043

Manufactured No

140

Each

2.0000

1

4

D3560-043

Arm Weldment

**

APR 25 2016

DAS
24
9-89

Location

Loc Qty

Loc Code

WA003

2

133911

2

MS20600-AD4W5

Purchased No

160

Each

476.0000

32

128

MS20600-AD4W5

Blind Rivet

**

Location

Loc Qty

Loc Code

ST308

339

m131340

11

m132769

328

WA004

137

m131618

134

m132640

3

Too
LONG

DAS
24
9-89

✓ MS20600 AD4W4 →

M 133932 →

804
128

APR 25 2016

DAS
24
9-89

March 07, 2016 3:52:27 PM

Shop Packet Print

Page 2

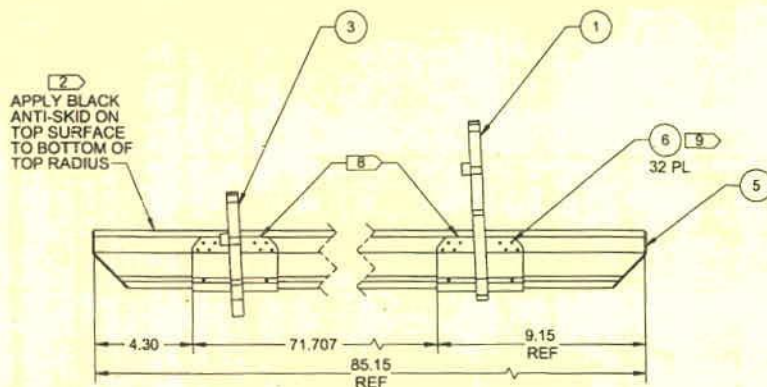
DQA: _____ Date: _____

WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

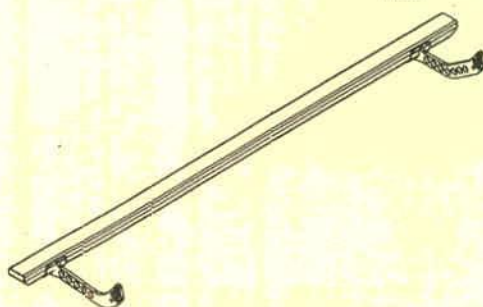
Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐																																																													
Date : _____		Step #: _____		QTY Effective : _____			MRB (QSI042) Approval																																																										
Description Work Order Deviation				Disposition				Completed By																																																									
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Root Cause		FAULT CATEGORY																																																															
Environment ☐	No Re-verification ☐	Pressure/Forced ☐	Temperature/Cure ☐	Power Loss/Surge ☐	Positioned Wrong ☐	Design ☐	Operator ☐	Bending ☐	Set-up ☐	Folio/Program ☐	Outside Dimensions ☐	Doc/Data ☐	Offset/Setup ☐	Centre Not Concentric ☐	BOM/Route ☐	Grain ☐	Over/Under tolerance ☐	Equip/Tooling ☐	Supplier ☐	Cracks ☐	Broken/Damage/Defect ☐	Weld ☐	Part Incorrect ☐	Handling/Pre ☐	Training ☐	Crimp/Kink/Ripple/Wave ☐	Inspection Incomplete/Unqualified ☐	Wrong Stock Pulled ☐	Part Lost/Missing ☐	Material ☐	Use for Testing ☐	Cuffs ☐	Contamination ☐	Out of Sequence ☐	Part Moved ☐	Internal Transport ☐	Poor Information ☐	Crushing ☐	Countersink ☐	Off-set ☐	Drawing ☐	Tribal Knowledge ☐	Rushing ☐	Heat Treat ☐	Cut Too Short ☐	Mislabeled ☐	Finish ☐	LOA ☐	Product Improvement ☐	Wave/Twist in Tube ☐	Instructions Incomplete/Unclear ☐	Fit/Function ☐	Misread ☐	Substation ☐	Process Improvement ☐	Marks/Chatter ☐	Drill Holes ☐	Misaligned/off center ☐	Turning Sequence ☐	Past Expiry Date ☐	Manufacturing Process ☐	OTHER : _____			
Misidentified ☐	Past Due ☐																																																																



MEASURED BEFORE END CAPS WELDED IN PLACE

FWD

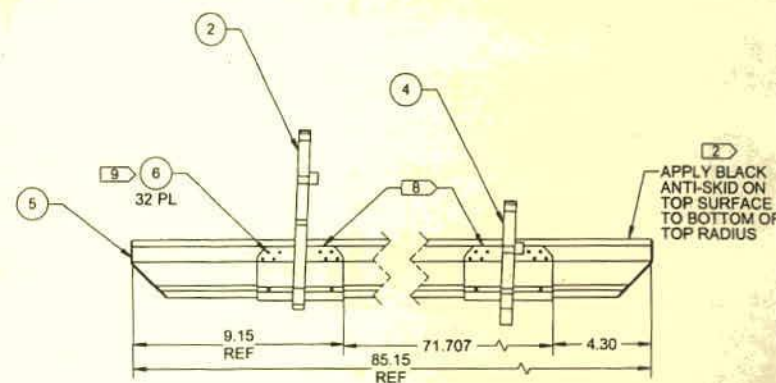


D3562-041 LH STEP ASSEMBLY

NOTES:

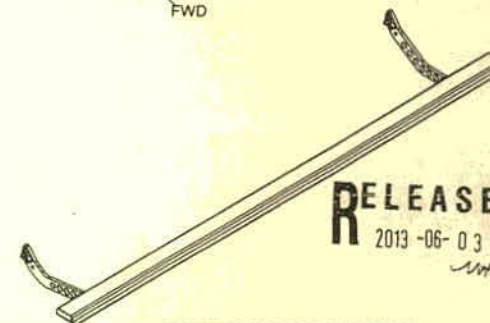
- 1) MATERIAL: N/A
- 2) FINISH:
 - i) POWDER COAT ASSEMBLY GLOSS WHITE (4.3.5.1) OR GREY SANDTEX (4.3.5.6) OR BLACK SANDTEX (4.3.5.7) OR GREEN SANDTEX (4.3.5.8) PER DART QSI 005 4.3
 - ii) BLACK ANTI-SKID PAINT PER DART QSI 005 4.4
- 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) UNITS: INCHES UNLESS OTHERWISE NOTED
- 5) BREAK SHARP EDGES: 0.005 TO 0.010 MAX
- 6) IDENTIFICATION: NONE
- 7) WEIGHT: 8.79 lbs
- 8) INSTALL ARM WELDMENTS WITH A LAYER OF SCOTCH-WELD DP460 BETWEEN THE ARM WELDMENT AND STEP EXTRUSION. FILL ANY TOOLING HOLES WITH SCOTCH-WELD DP460. CLEAN OFF EXCESS BEFORE POWDER COATING.
- 9) TRANSFER DRILL #30 DEBURR & TOUCH UP HOLES WITH CHEMICAL CONVERSION COAT BEFORE RIVETING

ITEM No.	QTY -041	QTY -042	P/N	DESCRIPTION
	X		D3562-041	LH STEP ASSEMBLY
		X	D3562-042	RH STEP ASSEMBLY
1	1		D3560-041	ARM WELDMENT
2		1	D3560-042	ARM WELDMENT
3	1		D3560-043	ARM WELDMENT
4		1	D3560-044	ARM WELDMENT
5	1	1	D3562-1	STEP ASSEMBLY
6	32	32	MS20600AD4W5	RIVET



MEASURED BEFORE END CAPS WELDED IN PLACE

FWD



D3562-042 RH STEP ASSEMBLY

F	REVISED NOTE 8 TO REMOVE MAGNOBOND, REPLACE WITH SCOTCH-WELD DP460, REF. PAR12-224. ADDED NOTE 9 AND SHEET 2	DW	13.05.15
E	ADD QTY(2) TO D2734 END PLATE ON D3562-042	PH	08.01.11
D	REMOVE D2808 SPACER NOTE, REDRAW IN SOLIDWORKS	DC	07.11.16
C	NOW MAGNOBOND, ADD D2808, REMOVE 4 RIVETS	CP	07.06.19
B	ARMS NOW RIVETED TO STEP	CP	07.01.15
A	NEW ISSUE	CP	06.09.26
REV	DESCRIPTION	BY	DATE
DESIGN			
DRAWN	DW		
CHECKED			
MFG. APPR.			
APPROVED			
DE APPR			
DATE	13.05.15		

DART AEROSPACE LTD
HAWKESBURY, ONTARIO, CANADA

DRAWING NO. D3562
REV. F
SHEET 1 OF 2
TITLE STEP ASSEMBLY
SCALE NTS

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20160322

st

142352

RELEASED
2013-06-03

DQA: _____ Date: _____

**WORK ORDER NON-CONFORMANCE / UPDATE**

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐					
Date : _____		Step #: _____		QTY Effective : _____			MRB (QSI042) Approval		
Description Work Order Deviation				Disposition				Completed By	
								Lead hand / Supervisor Approval Verification	
								QC / QA Coordinator Approval	
Root Cause		FAULT CATEGORY							
Environment ☐	No Re-verification ☐	Pressure/Forced ☐	Temperature/Cure ☐	Power Loss/Surge ☐	Positioned Wrong ☐				
Design ☐	Operator ☐	Bending ☐	Set-up ☐	Folio/Program ☐	Outside Dimensions ☐				
Doc/Data ☐	Offset/Setup ☐	Centre Not Concentric ☐	BOM/Route ☐	Grain ☐	Over/Under tolerance ☐				
Equip/Tooling ☐	Supplier ☐	Cracks ☐	Broken/Damage/Defect ☐	Weld ☐	Part Incorrect ☐				
Handling/Pre ☐	Training ☐	Crimp/Kink/Ripple/Wave ☐	Inspection Incomplete/Unqualified ☐	Wrong Stock Pulled ☐	Part Lost/Missing ☐				
Material ☐	Use for Testing ☐	Cuffs ☐	Contamination ☐	Out of Sequence ☐	Part Moved ☐				
Internal Transport ☐	Poor Information ☐	Crushing ☐	Countersink ☐	Off-set ☐	Drawing ☐				
Tribal Knowledge ☐	Rushing ☐	Heat Treat ☐	Cut Too Short ☐	Mislabeled ☐	Finish ☐				
LOA ☐	Product Improvement ☐	Wave/Twist in Tube ☐	Instructions Incomplete/Unclear ☐	Fit/Function ☐	Misread ☐				
Substation ☐	Process Improvement ☐	Marks/Chatter ☐	Drill Holes ☐	Misaligned/off center ☐	Turning Sequence ☐				
Past Expiry Date ☐	Manufacturing Process ☐	OTHER : _____							
Misidentified ☐	Past Due ☐								

8 7 6 5 4 3 2 1

D

D

C

C

B

B

A

A

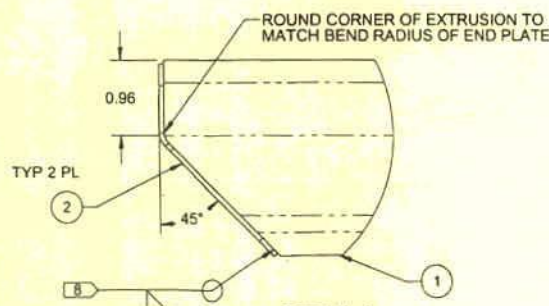
8 7 6 5 4 3 2 1

DETAIL A
B4-2

85.15

2.51

D3562-1 STEP ASSEMBLY



DETAIL A
C7-2
TYP BOTH ENDS
SCALE 1X

NOTES:

- 1) MATERIAL: N/A
- 2) FINISH: CHEMICAL CONVERSION COAT STEP EXTRUSION
PER DART QSI 005 4.1 BEFORE ASSEMBLY
- 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) UNITS: INCHES UNLESS OTHERWISE NOTED
- 5) BREAK SHARP EDGES: 0.005 TO 0.010 MAX
- 6) IDENTIFICATION: NONE
- 7) WEIGHT: 6.68 lbs
- 8) WELDING: ALL WELDS SHALL BE 100% VISUALLY INSPECTED
BY A QUALIFIED INSPECTOR PER DART QSI 004

ITEM No.	QTY	P/N	DESCRIPTION
	X	D3562-1	STEP ASSEMBLY
1	A/R	D2622-XXX	STEP EXTRUSION
2	2	D2734	END PLATE

RELEASED
2013-06-03
Wf

DESIGN	GP	DART AEROSPACE LTD	
DRAWN	DW	HAWKESBURY, ONTARIO, CANADA	
CHECKED	GP	DRAWING NO.	REV. F
MFG. APPR.	GP	D3562	SHEET 2 OF 2
APPROVED	GP	TITLE	SCALE
DE APPR.	GP	STEP ASSEMBLY	NTS
DATE	13.05.15	COPYRIGHT © 2006 BY DART AEROSPACE LTD THIS DOCUMENT IS PROPRIETARY AND CONFIDENTIAL. IT IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COPIED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE LTD.	

DQA: _____ Date: _____

**WORK ORDER NON-CONFORMANCE / UPDATE**

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Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐																																																											
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OTHER : _____																																																															

Linda Lacelle

From: Jose Miguel Fernandez-Busto
Sent: Friday, May 20, 2016 10:17 AM
To: Linda Lacelle
Cc: Denis Maranda
Subject: RE: Wingwalk (RE: CCG - Request by Bell to have primed parts)

Here is Silvio's response to your second question:

From: Levesque, Sylvio [mailto:sylviolevesque@bh.com]
Sent: Friday, May 20, 2016 10:14 AM
To: Jose Miguel Fernandez-Busto <jmiguel@dartaero.com>
Cc: Smith, Lea <leasmith@bh.com>
Subject: RE: wingwalk D412-630-033/-034

Yes I confirm!

Sylvio Levesque
Senior technology specialist eng ops support
Aircraft Completion and Delivery Center
Bell helicopter Textron Canada

José Miguel.

From: Linda Lacelle
Sent: Friday, May 20, 2016 10:09 AM
To: Jose Miguel Fernandez-Busto <jmiguel@dartaero.com>
Cc: Denis Maranda <dmaranda@dartaero.com>
Subject: RE: Wingwalk (RE: CCG - Request by Bell to have primed parts)

Thanks, was just about to ask the same question on the folding steps, D412-630-033/-034, they require wingwalk as well. Can you please confirm they want the wingwalk on these as well?

Thx
Linda

From: Jose Miguel Fernandez-Busto
Sent: Friday, May 20, 2016 10:02 AM
To: Linda Lacelle <llacelle@dartaero.com>
Cc: Denis Maranda <dmaranda@dartaero.com>
Subject: Wingwalk (RE: CCG - Request by Bell to have primed parts)

Good morning Linda,

With respect to your question below, I have received the following response from Bell:

Go ahead and do the Wingwalk please.

Sylvio Levesque

Senior technology specialist eng ops support
Aircraft Completion and Delivery Center
Bell helicopter Textron Canada
Office (450) 971-6500 ext:2373
Mobile 514-476-1379
sylviolevesque@bh.com

José Miguel.

From: Linda Lacelle
Sent: Wednesday, May 18, 2016 10:55 AM
To: Jose Miguel Fernandez-Busto <jmiguel@dartaero.com>; Steve Ghaleb <sghaleb@dartaero.com>
Cc: Denis Maranda <dmaranda@dartaero.com>
Subject: RE: CCG - Request by Bell to have landing gear painted in red CCG color code P1203ES

Good Morning,
We also need to know if we apply wingwalk where applicable after prime, or is Bell going to be taking care of this – D3463-041/-042.

Thx
Linda

From: Denis Maranda
Sent: Tuesday, May 17, 2016 9:08 AM
To: Jose Miguel Fernandez-Busto <jmiguel@dartaero.com>; Steve Ghaleb <sghaleb@dartaero.com>
Cc: Bill Beckett <bbeckett@dartaero.com>; Linda Lacelle <llacelle@dartaero.com>
Subject: FW: CCG - Request by Bell to have landing gear painted in red CCG color code P1203ES

As per the customer request and to avoid confusion please update the SO123808 due 6/20, 7/25, 8/30 & 10/4 and SO 123812 due 6/29, 7/25, 8/30 to avoid confusion. SOs need be amended with a note saying unpainted primed parts only.

D412-630-031
D412-630-032

D412-630-033
D412-630-034

With all the trouble this is causing us we should not offer any discounts but that is your call.

From: Jose Miguel Fernandez-Busto
Sent: Monday, May 02, 2016 10:05 AM

To: Bill Beckett <bbeckett@dartaero.com>

Cc: Denis Maranda <dmaranda@dartaero.com>; Linda Lacelle <llacelle@dartaero.com>; Steve Ghaleb <sghaleb@dartaero.com>; Marc Bellavance <mbellavance@dartaero.com>

Subject: RE: CCG - Request by Bell to have landing gear painted in red CCG color code P1203ES

Hola Bill,

I just spoke with Sylvio Levesque from Bell and he confirmed that they would like to continue doing the CCG painting at Mirabel. Their only concern is with the folding steps, as they are not sure if their paint will stick on them. As such, he clarified his request:

1. Is Dart able to powder coat parts D412-630-031/-032/-033/-034 in red color P1203ES?
2. If so, what is the additional cost and impact on delivery?
3. If not, can Dart supply these parts only primed, so that Bell can paint at their facility?

He also clarified that Bell does not want the above mentioned parts spray painted in P1203ES and that we need to answer the questions above, before undertaking any additional work related to this request.

Finally, he is willing to supply us with a part painted in P1203ES so that we can match that color. To this effect, we need to confirm how big of a sample would we like to receive.

@Denis, can you please provide me with your answers to the questions indicated above? Thank you,

José Miguel.